

Position Title

NASA's Pathways Student and Recent Graduate Opportunities/Mechanical Engineer, Mechanical Components

NASA Announcement Number

GR13P0032

OPM Control Number / Status

336954400 / Posted

<http://www.usajobs.gov/GetJob/ViewDetails/336954400>

Open Dates

02/01/2013 - 02/22/2013

Position Information

Full-Time / Recent Graduates

Who May Be Considered

Recent Graduates from qualifying institutions having completed an academic program within the preceding two years of degree or certification, except for veterans precluded from doing so due to their military service obligation, who will have up to six years after degree or certificate completion to apply.

Organization

DER0 / MECHANICAL & ROTATING SYSTEMS BRANCH

Vacancy Type

Case File

Salary Range

\$44,176 - \$54,028

Pay Plan - Series / Grade (Low, High, Potential)

GS - 0830 / 07, 09, 13

Duty Location

391680035 - Cleveland, OH (1)

Citizenship Required

True

Job Summary

The NASA Pathways Recent Graduate Program (RGP) is a formal development program that provides the opportunity for employment and career advancement in the Federal Government. The successful candidate will be placed in a one year formal development program (may be extended up to two years) under the guidance of a mentor and be provided with at least 40 hours of job-related training. Upon completion of the program, Recent Graduates may be converted to a permanent position (or, in some limited circumstances a term appointment lasting 1-4 years).

To be eligible for conversion, Recent Graduates must have:

Successfully completed at least 1-year of continuous service in addition to all requirements of the Program; demonstrated successful job performance; and met the qualifications for the position to which the Recent Graduate will be converted.

The individual selected for this position will serve as Mechanical Engineer in the Mechanical and Rotating Systems Branch at NASA Glenn Research Center with a specialty in Mechanical Components. The work involves research, analysis, development, and evaluation of mechanical components and power transfer systems. Other duties include conducting research into basic mechanisms; developing and evaluating the technical for engine and mechanical power transfer systems; managing associated contractual programs; and/or providing consultation to other agencies and organizations on problems and solutions pertaining to mechanical component systems. Additional duties include investigation, research, studies, and development of sealing mechanisms; methods to predict and control shaft and bearing response and stability; the dynamics of multi-rotor turbine engines or rocket vehicle turbo-pumps; gears, traction, and hybrid power transmissions; and advanced bearings, gears, and transmission systems.

Comments

the individual selected for this position will participate in one of three NASA Pathways Programs. These are formal training programs consisting of specialized training designed to accelerate an employee to the full performance level. Participant completes assigned duties, tasks, readings, and developmental activities specified in the program. Some programs consist of formal rotational periods of study and work. Program participants receive formal periodic assessments of progress.

Your qualifications will determine your starting salary and grade level. This position will be filled at Step 1 of the GS-7 or 9 levels with promotion potential to GS-13. Your application must indicate the lowest grade you will accept.

Applicants must be prepared to provide college transcripts upon request.

To receive consideration, you must submit a resume and answer NASA-specific questions. The NASA questions appear after you submit your resume and are transferred to a NASA web site. If you successfully apply, USAJOBS will show your application status as 'resume received - complete.' If your status is 'Application Started,' you have not successfully applied. Do not rely on a USAJOBS email to confirm successful application only an email from NASA confirms a successful application.

****Your resume MUST contain your complete degree information (i.e., type of degree received, year degree received, G.P.A, and major area of study) in order to be considered. You MUST include the descriptive title, and number of semester/quarter hours. You are also strongly encouraged to detail any relevant coursework and/projects. If this information is not provided, your education may not be appropriately evaluated and you may lose consideration for this position. Please note that degrees in engineering technology are not considered to be qualifying for this position. If you are selected for this position, you will have to provide an official copy of your transcripts prior to entering on duty. ****

Relocation expenses are not authorized.

Marketing Summary

NASA, the world's leader in space and aeronautics is always seeking outstanding scientists, engineers, and other talented professionals to carry forward the great discovery process that its mission demands. Creativity - Ambition - Teamwork - A sense of Daring - and a Probing Mind - That's what it takes to join NASA, one of the best places to work in the Federal Government.

Key Requirements

1. Must have received qualifying degree within 2 years of appointment date.
2. Applicants must meet all qualification requirements by May 31, 2013.
3. Position is Excepted Service-Excluded from the Career Transition Program.
4. Position subject to pre-employment background investigation.
5. Applicants must possess at least a Bachelor's Degree or equivalent.

Total number of openings

1

Major Duties

The work involves research, analysis, development, and evaluation of mechanical components and power transfer systems. Other duties include conducting research into basic mechanisms; developing and evaluating the technical aspects for engine and mechanical power transfer systems; managing associated contractual programs; and/or providing consultation to other agencies and organizations on problems and solutions pertaining to mechanical component systems. Additional duties include investigation, research, studies, and development of sealing mechanisms; methods to predict and control shaft and bearing response and stability; the dynamics of multi-rotor turbine engines or rocket vehicle turbo-pumps; gears, traction, and hybrid power transmissions; and advanced bearings, gears, and transmission systems.

As an advanced trainee at the GS-7 grade level, the incumbent will increase knowledge, skills, and abilities in the profession. As part of planned career development, works with and assists senior members of the staff in the performance of analytical/scientific/engineering assignments. Receives advanced training through classroom and on-the-job instruction to provide a more thorough understanding of and exposure to laws and regulations, administrative policies, production/validation processes, and the various methods employed in design, evaluation, research, or other analytical/scientific/engineering functions. Independently carries out the more common professional assignments in which he/she has received specific or related training. Typically, assignments are restricted to those situations where more simple and standardized practices and processes are used, and where the environment is known to be cooperative. Functions in an assistant capacity, typically working with senior staff members, carrying out predetermined phases of the assignments designed to provide broad exposure to the work in the profession. The incumbent is required to increase networks and contacts beneficial to the successful performance of assignments. Conducts regular interactions with colleagues and supervisors in order to complete work assignments.

At the GS-9 grade level, the incumbent is required to design or direct the development of unique or leading-edge technology, equipment, or systems to meet specific mission requirements. Projects significantly affect agency or government programs. Serves as a technical specialist in the development, design, and integration of assigned mechanical engineering technologies, equipment, or systems. Develops extensive and in depth designs of new facility systems or modifications to existing systems and structures. Technically reviews and comments on operational drawings and sketches that are prepared by others. Identifies needed action to correct deficiencies and upgrade system procedures and documents to support new design requirements. Reviews the progress of design work to ensure that it satisfies design objectives and is economical, accurate, and practical. Plans and coordinates assignments with other agencies and contractors to ensure full integration of technical and operational requirements in areas such as propulsion and power. Evaluates design requirements and limitations of an uncertain nature under which systems and/or equipment must operate.

General Qualifications

NASA Pathways candidates will meet the qualification requirements consistent with NASA and the OPM qualification standards applicable to the position being filled. Where appropriate, candidates will be required to meet NASA's Aeronautics, Scientific, and Technical (AST) qualification standards for the position(s) for which they are applying.

To meet eligibility requirements for this position under the NASA Pathways Recent Graduate Program (RGP), applicants must have completed, a qualifying Bachelors, Masters or Doctorate degree, within the previous 2 years, from a qualifying educational institution. A veteran, who, due to military service obligations was unable to apply within 2 years of receiving their degree, has up to 6 years after degree completion to apply. In addition to meeting these basic eligibility requirements to apply for the NASA Pathways RGP, individuals must:

- * Meet the qualification standards of the position.
- * Be a United States citizen.
- * Meet any Agency-specific requirements identified in the job announcement (e.g., security).

To qualify for the GS-7: For GS-7 grade level consideration: Applicants must have one full year of graduate education

OR

undergraduate degree with superior academic achievement (one of the following): (1) applicants must be in the upper third of their graduating class in the college, university, or major subdivision; or (2) Applicants must have a 2.9 or higher out of a possible 4.0 GPA; or 3.5 or higher out of a possible 4.0 GPA based on courses completed in their major field of study during the final 2 years of the curriculum; or (3) Election to membership in a national scholastic honor society; or an equivalent combination of qualifying education and experience which meets qualification requirements.

To qualify for the GS-9: In addition to the basic education requirements (see the section on Qualification Requirements for Education), applicants must have at least one of the following:

- a. Completion of all requirements for a master's or equivalent graduate degree in an appropriate field;

OR

- b. Regardless of the field of undergraduate study, completion of the requirements for a master's or higher degree in engineering is fully qualifying, provided the applicant's total background, i.e., education and any experience, demonstrates evidence of knowledge, skills, and abilities that are substantially equivalent to those acquired through the successful completion of the courses specified under Basic Education Requirements.

OR

- c. Completion of all requirements for a bachelor's degree in a qualified engineering field AND 1 year of specialized experience equivalent to the GS-7 grade level.

Specialized experience at the GS-7 level is defined as having performed mechanical design of aerospace hardware in a development environment to include modeling with Pro/Engineer or other solid modeling

software, analysis with NASTRAN or ANSYS, and/or kinematic analysis with ADAMS or RecurDyn with basic knowledge of machine design and dynamics.

Specialized experience at the GS-9 level is defined as having performed mechanical design of aerospace hardware in a development environment to include modeling with Pro/Engineer or other solid modeling software, analysis with NASTRAN or ANSYS, and/or kinematic analysis with ADAMS or RecurDyn with advanced fundamental knowledge of machine design, kinematics, vibrations and controls.

Educational Qualifications

Required college majors for applicants qualifying on the basis of undergraduate or graduate education only: Aeronautical Engineering, Aeronautics, Aerospace Engineering, Astronautical Engineering, Astronautics, Astrophysics, Electrical Engineering (except power), Electronics Engineering, Applied Mechanics, Engineering Mechanics, Mechanical Engineering, Nuclear Engineering, Nuclear Engineering Physics, Physics, Applied Physics, Engineering Physics. Other appropriate physical or computer science, mathematics or engineering fields are qualifying if the major includes or is supplemented by at least 12 semester hours (or the equivalent) of appropriate physical science or engineering courses including nine semester hours (or the equivalent) of physics, thermodynamics, fluid dynamics or gas dynamics.

FOR THIS POSITION, A DEGREE IN MECHANICAL ENGINEERING, IS PREFERRED.

U.S. EDUCATION: Institutions located within the United States that have attained accreditation are listed on the U.S. Department of Education's website. To verify your institution's accreditation, please assess this website <http://ope.ed.gov/accreditation/Search.aspx>. A complete listing of all institutions, including those located outside of U.S. territories, may be found in Accredited Institutions of Post-Secondary Education, a handbook published annually by the American Council on Education (ACE).

FOREIGN EDUCATION: If you are using education completed in foreign colleges or universities to meet the qualification requirements, you must show that the education credentials have been evaluated by a private organization that specializes in interpretation of foreign education programs and such education has been deemed equivalent to that gained in an accredited U.S. education program; or full credit has been given for the courses at a U.S. accredited college or university. For further information, visit: <http://www.ed.gov/about/offices/list/ous/international/usnei/us/edlite-visitus-forrecog.html>

Requirements

U.S. citizenship is required.

How You Will Be Evaluated

Candidates will be assessed either based solely on basic eligibility requirements or may include a qualitative rating of candidates. NASA Pathways candidates will meet the qualification requirements consistent with the OPM qualification standards applicable to the position being filled. Where appropriate, candidates will be required to meet NASA's Aeronautics, Scientific, and Technical (AST) qualification standards for the position(s) for which they are applying. Veterans' preference applies to all selections made under the Pathways authority in accordance with Part 302 of 5 CFR. Candidates who meet the minimum qualification requirements need not be further evaluated; however, if no further evaluation is done, qualified veterans have absolute preference. If candidates are further evaluated using NASA's category rating process, qualified veterans have absolute preference within the appropriate category.

Benefits

NASA offers excellent benefit programs and competitive salaries. To learn more about pay and benefits at NASA, visit the [NASA Jobs website](http://nasajobs.nasa.gov/benefits/benefits.htm).

Other Information

Any applicant tentatively selected for this position may be required to undergo a pre-employment background investigation. As a condition of employment, male applicants born after December 31, 1959, must certify that they have registered with the Selective Service System, or are exempt from having to do so under the Selective Service Law. Your USAJobs account asks you to assign a name to each of your resumes. When you apply to a NASA position, we will show you the text of the resume you have submitted, but we do not maintain the name you have assigned to that resume. If you wish to keep track of that information, we recommend you make note of it at the time you apply.

How to Apply

This vacancy is being filled through NASA STARS, an automated Staffing and Recruitment System. NASA partners with USAJOBS in providing a seamless application process. Before you begin the application process, please read the vacancy announcement carefully and have all required information available. You may begin the process of submitting your resume by clicking on the "Apply Online" link.

In order to be considered, you must submit a resume completed on the USAJOBS site. When completing your USAJOBS resume, please remember that NASA limits resumes to the equivalent of approximately SIX typed pages, or approximately 22,000 characters including spaces. You will NOT be allowed to complete the application process if your resume is too long or if your resume was uploaded to USAJOBS from a second source. Additionally, NASA does not accept documents attached through USAJOBS' document attachment feature.

Once you submit your resume to NASA, you will be asked to complete a short series of additional questions. You must finish the entire process in order to have a complete application package and receive consideration. Your answers will not be saved unless you finish the entire application. You may edit a previously-submitted application, if the announcement is still open. For more information, see the Applicant Guide. (https://resume.nasa.gov/applicant_guide.htm).

If you are unable to apply electronically for this position, submit your resume and supplemental questions to: National Aeronautics and Space Administration (NASA), Resume Operations Center, Mailstop: HS50, Marshall Space Flight Center, AL 35812. DO NOT submit your resume directly to the Center advertising this vacancy. Mailed resumes must be received by the close of business on the closing date of the announcement. Hard copy resumes requirements are provided at: Hard Copy Resume Requirements (<http://NASAjobs.NASA.gov/howtoapply/hardcopyresumes.htm>).

If you are a first time applicant, we recommend that you review NASA's Applicant Guide (https://resume.nasa.gov/applicant_guide.htm) to ensure that you are providing a complete resume. Failure to submit the supplemental data and a resume that contains all of the required information may result in loss of consideration for positions in which you are interested.

All applications must be received no later than midnight Eastern Time on the closing date of the announcement.

Required Documents

NASA's application process has been specifically developed to ensure that we only ask you for the information we absolutely need to evaluate your qualifications and eligibility. In order to apply for this position, you only need to submit your resume and answer the screening questions and supplemental information. No additional documentation is accepted at the time of application. (For example you need not submit narrative KSA statements; they are not required and will not be evaluated.) In this way we allow you to focus on preparing a resume that best describes your background and abilities. For assistance in preparing your resume, consult the *Applicant Guide* (https://resume.nasa.gov/applicant_guide.html *target=_blank*). Nothing further is required until requested by the Human Resources Office. At that point, we may ask you to submit documentation to support statements made in your resume. For example, we may ask you to provide academic transcripts or proof of Federal employment status. If you are claiming veterans' preference, we may ask you to submit proof of veterans' preference (DD-214, and, if claiming 10-point preference, SF-15 plus proof required by that form). If you fail to provide the required documents within the stated time period, we may withdraw a job offer and/or remove you from further consideration.

Contact

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What to Expect Next

Candidates for NASA positions are evaluated using our automated staffing and recruitment system, NASA STARS, which compares your skills and experience as described in your resume with the requirements of the position. If you are found to be a highly qualified candidate, you will be referred to the selecting official for further consideration. (In some cases, individuals with priority for special consideration must be considered and selected before other candidates.) Whether or not you are contacted for an interview depends upon the location of the position and the judgment of the selecting official.

At NASA, we pride ourselves on efficient and timely recruitment actions, and you can normally expect to learn the outcome of the selection process in a fairly short period of time. In addition, to ensure that you can measure progress for yourself, NASA provides you with regularly updated information on the status of the vacancy announcement.